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7590 Siemens Corporation Intellectual Property Department 186 Wood Avenue South Iselin, NJ 08830			EXAMINER VU, TUAN A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/822,300

Applicant(s)

MUENZEL, GEORG

Examiner

Tuan A. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the Applicant's response filed 5/23/07.

As indicated in Applicant's response, claims 1, 7, 19, 36, 41, 44-45, 51-52 have been amended. Claims 1-52 are pending in the office action.

Claim Objections

2. Claim 51 is objected to because of the following informalities: the newly added phrase recited as 'a set of markup language tags associated with the markup language version of the industrial automation computer program defined for the graphical programming language, the set of markup language tags one of a plurality of sets of markup language tags, each set of markup language tags of the plurality of sets of markup language tags defined for a corresponding graphical language of a plurality of graphical languages used in industrial automation' appears to be improperly constructed with no relationship to the rest of the semantic and syntactic context of the pertinent paragraph, and is marred with fragments of sentences without any conjugated verb action, which in all appears convoluted, virtually idiomatic, hard-to-understand an English expression. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 36-38, 51-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. The reciting of 'computer program' having instructions for 'causing a programmable logic controller **to control** an industrial process ...' (re claim 36) appears to be preemptive functionality that reads onto any similar endeavor by any prior art of related field, and this is not sufficiently setting forth the definiteness expected to reasonably construe what the invention is capable of in terms of the specific extent in functionality for this claimed computer product. In other words, claim 36 is as being incomplete for omitting essential elements and/or cooperative relationships of elements that reasonably convey the realization of the 'to control' limitation, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the controlling of an industrial process by a computer program operating on a PLC and the very use of markup language in developing the program. Further, the very broad terminology recited as 'to control' is considered not a specific limitation but rather a concept/limitation that covers a large range of actions. Indeed, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required

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feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 36 recites the broad recitation 'program ...causing a programmable logic controller to control a industrial process', and the claim also recites 'computer program developed via a markup language version of the ... computer program' which is the narrower statement of the range/limitation. One of ordinary skill in the art would not be taught how a program developed via a markup version thereof can enable this very program to cause a industrial controller to control an industrial process, which appears to be a very broad endeavor in the absence of any more specifics. For example, it is indefinite as to how a markup construct can enable a program to cause a PLC to control an industrial process.

This claim 36 is either indefinite for omitting essential steps or fails to provide definiteness to the subject matter being claimed; and will be treated without proper merits in regard to the 'to control' concept as mentioned above.

Claims 37-38 fail to remedy to the deficiency of claim 36, hence are rejected for being indefinite with regard to define the metes and bounds of the computer product functionality.

6. Claim 51 (along with claim 52) is rejected because of the indefinites identified in the reciting of the newly added phrase '*a set of markup language tags associated with the markup language version of the industrial automation computer program defined for the graphical programming language, the set of markup language tags one of a plurality of sets of markup language tags, each set of markup language tags of the plurality of sets of markup language tags defined for a corresponding graphical language of a plurality of graphical languages used in*

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industrial automation'. One of ordinary skill in the art would not be apprised on the invention metes and bounds in terms of relationship between the elements recited because of what appears to be an incongruous amalgamation of fragmented teachings (see Claim Objection), nor is one able to construe a minimal functionality concerning the plurality of tags recited within the onset of 'receiving' recited in the paragraph in order to make use of the plurality of tags presented as set each defined for a corresponding language of another plurality of languages. The above phraseology is treated as though the plurality of tags would each represent a graphical language of some type, among more language types or families.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8, 10-12, 14-26, 28-30, 32-43, 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dole, USPN: 6,634,008, in view of the admitted prior art (hereinafter APA--see Background of Invention, pg. 1-2 of Specifications)

As per claim 1, Dole discloses a method for representing industrial automation computer program code created using a graphical programming language (e.g. col. 8, lines 22-32), the method comprising:

identifying an internal representation of an industrial automation computer program (e.g. *files and libraries, file defining methodologies... executable methodologies* - col. 7, lines 14-49; *Verilog file* – col. 8, lines 25-32; col. 8, line 63 to col. 9, line 19; col. 10, lines 32-56; col. 13, line

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43 to col. 14, line 15; *netlist* – col. 14, lines 42-47; step 503 – Fig. 8; Fig. 11-12; *job steps, chain job* – col. 16, lines 5-9; col. 16, lines 53-55 – Note: all files generated from the EDA tool reads on internal representation of the automation program), the internal representation created via the graphical programming language (e.g. col. 8, lines 22-32; col. 5, lines 11-21; step 503 – Fig. 8) ; and

converting the internal representation to a markup language version of the code industrial automation computer program (e.g. HTML, CGI - col. 7, lines 26-42; Fig 10; *more desirable to use XML* -col. 16, lines 10-47; Fig. 13).

Dole does not explicitly disclose that the industrial automation program is to control a programmable logic controller (PLC). At the time the invention was made, embedding complex system in a single chip – IC - such as endeavored by Dole (see Dole: *system-on-chip* - BACKGROUND) such that complex controlling micro chip devices, e.g. integrated circuits or microcontroller being a field for developers to develop automation control code to test their functions was a known concept. Dole methodology to design complex controller chip wherein design is based on graphical selection regarding chip related functions or architecture (see *place and route* -Fig. 9; tool selection -Fig. 10; *verilog* - Fig. 11; *chip home page* – col. 15, lines 40-62) is thus further evidenced by APA; that is, APA discloses that graphical design by engineers can be supported by graphical programming languages that enable specify control logic of programmable logic controller (PLC – see Specifications , pg. 1). APA is teaching the same line of industrial type of design and/or circuits building/controlling as Dole -- that is, in view of the web based and graphic-based tool/methodologies by Dole to. The graphical programming concept is evidenced in Dole's developing of industrial type of design via using graphical tool

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and methodologies, wherein complex chip(IC) logic or controller functionality can be targeted for being modeled and graphically designed (see Dole: Fig. 28; *Tool 1405* Fig. 5; *Netlist* EDA Tool – Fig. 6; *Flow control tool 315* – Fig. 4 -- Note: graphically assembling of blocks and execution of the control flow of components in a circuit design reads on graphical programming). Based on the fact that one such microcontroller IC type design or complex controller device being such target can be a PLC as set forth by APA from above, it would have been obvious for one of ordinary skill in the art at the time the invention was made to apply circuit synthesis tool, control data communication and web markup conversion as taught by Dole so that the target to be designed would be a control logic of a integrated chip or single controller having control functionality of a PLC such as taught by APA. One would be motivated to do so because the internet based control applied to industrial design and control as endeavor by both Dole using this framework to implement industrial design, programming and testing of a PLC as by APA would enable hardware modeling and design such IC controller as perceived in Dole to put into use the very usefulness of a PLC using the possibilities from a computer technology to implement the graphical programming as set forth above (see APA, pg. 1) and in Dole from above.

As per claims 2-3, Dole discloses storage of the markup language version of the industrial automation computer program to be stored in computer storage device (e.g. *XML files* – col. 16, line 21-67) for transmission and being displayed for editing discloses inherent storage for transport across the internet (e.g. Fig. 5).

As per claims 4 and 5, Dole discloses converting the markup-formatted code of the industrial automation computer program to the internal representation in computer memory as a

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corresponding graphical programming language version the industrial automation computer program (e.g. step 527 – Fig. 13; Fig. 17-23; *Netlist* EDA Tool – Fig. 6; *Flow control tool 315* – Fig. 4 – Note: executing markup file via file decompression to restore *DAG or chip/block or Netlist* based synthesis files defining a circuitry job chain reads on converting back into corresponding graphical programming language).

As per claims 6-7, Dole discloses Fig. 5 and an XML version (e.g. col. 16, line 10-67).

As per claims 8 and 10-11, Dole discloses *step-by-step flows* and *schematic* for a circuit design being documented (e.g. col. 5, lines 11-16; col. 12, lines 5-48); hence has disclosed a graphical language comprising flowchart language and sequential flow chart (*DAG* - col. 16, lines 52-55; col. 17, lines 22-27; Fig. 23) and block diagram language (e.g. step 405-407 – Fig. 9; col. 12, lines 42-55; Fig. 8, Fig. 19, 28 – Note: *model* and *physical layout* of IC in a circuit as well as UI manipulating of block flow – see col. 5, lines 11-32 - reads on block diagram graphical type of language).

As per claims 12 and 14-15, Dole discloses modeling (e.g. *synthesis tool, behavioral model, schematic* - col. 12, lines 5-48; col. 15, lines 20-47; *Flow/steps 1119* -Fig. 10; Fig. 23); hence has disclosed graphical language comprising a flowchart, block diagram, and function diagram (re claims 8, 10-11) being converted into markup language and decompressed therefrom (re claims 4-5).

As per claim 16, Dole discloses a tool with editor command (e.g. col. 13, lines 22-44; Fig. 4, 10, 12).

As per claim 17, Dole discloses executing circuit of design block from the XML language in corresponding graphical language version of the industrial automation computer

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program (e.g. step 527 – Fig. 13; Fig. 17-23; *Netlist* EDA Tool – Fig. 6; *Flow control tool 315* – Fig. 4 – refer to rationale of claim 5).

As per claim 18, see Dole's browser use (Fig. 5).

As per claim 19, this is a computer product with computer-readable medium (see Dole: col. 28, lines 6-8) for performing the same steps limitations recited respectively in claim 1; hence is rejected with the corresponding rejections as set forth in claim 1, including the rationale to address the PLC controlling function of industrial automation computer program limitation.

As per claims 20-23, refer to the rejections of claims 2, 4, 3, 5, respectively.

As per claims 25-26, and 28, refer to claims 7-8, and 10, respectively.

As per claims 24, 29 and 33, refer to claims 6 (for browser) and 11(for sequential chart), respectively.

As per claims 30 and 32, refer to claims 12, 15, respectively.

As per claims 34-35, refer to claims 17 and 16, respectively.

As per claim 36, Dole discloses computer-readable storage medium having stored thereon instructions for activities comprising controlling a industrial process by execution of an industrial automation program code developed via a markup language version of the industrial automation computer program (e.g. col. 16, lines 10-47; Fig. 13), but Dole fails to teach causing said control by way of a programmable logic controller via execution of said industrial automation computer program. However, the limitation as to this automation program adapted for an application such to control in a programmable logic controller (PLC) has been treated as obvious in view of the rationale as set forth in claim 1.

As per claim 37, see claim 7.

As per claim 38, Dole implicitly discloses coupling to remote computer system (e.g. Fig. 5).

As per claim 39, Dole discloses a computer program product for permitting a user to create industrial automation computer programs (e.g. col. 8, lines 22-32), the product comprising a computer-readable storage medium having a computer program code on it, the code comprising:

industrial automation graphical programming language code, an editor adapted to permit the user to create industrial automation computer program using graphical elements (e.g. *synthesis tool, behavioral model, schematic* - col. 12, lines 5-48; *DAG* - col. 16, lines 52-55; col. 17, lines 22-27; Fig. 23; step 405-407 – Fig. 9; col. 12, lines 42-55),

the industrial automation graphical program being stored in an internal representation during execution (*files and libraries* - col. 7, lines 14-49; *Verilog file* – col. 8, lines 25-32; col. 8, line 63 to col. 9, line 19; col. 10, lines 32-56; col. 13, line 43 to col. 14, line 15; *netlist* – col. 14, lines 42-47; step 503 – Fig. 8; Fig. 11-12; *job steps, chain job* – col. 16, lines 5-9; col. 16, lines 53-55); and

program code for converting the industrial automation computer program thus stored in the internal representation to a markup language version of the industrial automation computer program (e.g. HTML, CGI - col. 7, lines 26-42; Fig 10; *more desirable to use XML* -col. 16, lines 10-47; Fig. 13).

Dole does not explicitly disclose that the industrial automation program is to control a programmable logic controller (PLC). But this limitation has been addressed in claim 1.

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As per claim 40, Dole discloses converting industrial automation computer program from the markup language format to the internal representation (see rejection of claim 4).

As per claim 41, Dole discloses a method for communicating the logical structure of software industrial automation control data in order to permit a plurality of application developers to create applications relating to the data, the method comprising:

creating a schema defining a content model for markup language version of an industrial automation computer program system (e.g. col. 7, lines 26-42; DTD – col. 16, lines 10-20; Fig. 13; col. 16, line 65 to col. 17, line 2) converted from a graphical language version of the industrial automation computer program (*synthesis tool, behavioral model, schematic* - col. 12, lines 5-48; *DAG* - col. 16, lines 52-55; col. 17, lines 22-27; Fig. 23; step 405-407 – Fig. 9; col. 12, lines 42-55); and

posting the schema for access over the network by the application developers (e.g. Fig. 5; Fig. 13; DTD – col. 16, lines 10-20).

Dole does not explicitly disclose that the industrial automation control program is to control a programmable logic controller (PLC); nor does Dole explicitly teach said PLC to control said industrial process via said industrial automation control program. However, this limitation has been addressed in claim 1.

As per claims 42 and 43, refer to claim 7-8, respectively.

As per claim 51, Dole discloses a method for industrial automation control applications, comprising:

providing a computer system coupled to a network (e.g. Fig. 5);

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configuring a first computer to receive over the network transmissions of data from a plurality of industrial automation developer systems (Fig. 3-5); and

receiving data from a the plurality of industrial automation computer program developer systems, the data comprising an industrial automation computer program in a markup language version (e.g. col. 16, line 21-67; step 527 – Fig. 13; Fig. 17-23), the markup language version of the computer program converted from a representation created using a graphical programming language (e.g. col. 7, lines 26-42; DTD – col. 16, lines 10-20 – Note: using browser technologies to create CGI-script or XML DTD file reads on using graphical programming language),

a set of markup language tags associated with the markup language version of the industrial automation computer program defined for the graphical programming language, the set of markup language tags one of a plurality of sets of markup language tags, each set of markup language tags of the plurality of sets of markup language tags defined for a corresponding graphical language of a plurality of graphical languages used in industrial automation (e.g. col. 7, lines 26-42; DTD – col. 16, lines 10-20; Fig. 13; col. 16, line 65 to col. 17, line 2-- Note: the whole and undecipherable limitation is treated as though the plurality of tags would each represent a graphical language of some type, e.g. one among more graphical types/ languages).

Dole does not explicitly disclose that the industrial automation program is to control a programmable logic controller (PLC). But this limitation has been addressed in claim 1.

As per claim 52, see claim 7.

9. Claims 44 –50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dole, USPN: 6,634,008, in view of the APA, and further in view of Darkinski et al, USPN: 7,089,530(hereinafter Darkinski)

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As per claim 44, Dole discloses a method for providing software industrial automation computer program from a system of developers coupled in a network (Fig. 5, 13), the system comprising:

accessing a markup language version of the industrial automation computer program (e.g. Fig. 10; col. 16, line 21-67), the markup language version of the computer program converted from a representation created using a graphical programming language (e.g. HTML, CGI - col. 7, lines 26-42; Fig 10; *more desirable to use XML* -col. 16, lines 10-47; Fig. 13 – Note: using browser technologies to create CGI-script or XML DTD file reads on using graphical programming language);

transmitting the markup language version of the industrial automation computer program over the network in connection of a client system address, thereby causing the markup-version of the industrial automation computer program to be received by the receiving system (e.g. Fig. 5, Fig. 13, 17-23).

Dole does not explicitly disclose a binary Common Object Model representation converted to obtain the markup language version. It was known concept that modeling in a browser-based network for communicating or exchanging streamed data like that of Microsoft Explorer (e.g. IE5) as suggested by APA (Specifications: BACKGROUND, pg. 1, bottom, pg. 2, top) utilizes Microsoft well-known tool such as 'COMMON OBJECT MODEL'; according to which, modeling using COM object is evidenced in Dardinski's method of distribution of automation/industrial control program (e.g. Dardinski: Fig. 1-2, 9) and parametric configuration therefor via marking up of parameters via tagging (see Fig. 102-104). Analogous to Dole using model to provide program control using browser technology and tagging of parameters,

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Dardinski teaches ladder logic modeling via a editing tool based on COM object architecture (e.g. sec 1.5.1 → 1.6.1.2, col. 40-45; *ladder logic* – sec 2.4.1, col. 94). It would have been obvious for one skill in the art at the time the invention was made to provide the XML-based data exchange in Dole's approach so that Dole's modeling would be implemented using Microsoft's COM architecture to model a process control configuration as taught by Dardinski in order to convert this COM specifications as XML representation for transmission or distribution as taught by Dole and in view of known practices in Microsoft-based browser technologies. One would be motivated to do so because the use of Microsoft COM representation (or binary COM reformatted representation) and COM's wealth of capabilities -- including exploiting object-oriented interfaces (e.g. MFC classes) and modeling/versioning (see Dardinski: Fig. 7-29; Fig. 32-35; col. 40, sec 1.5.1)-- would enable IE explorer-based methodologies like XML-based streaming to take advantages of available existing utilities for representing request and exchanging the COM transformed representation thereof (as taught by Dardinski) within the elements of the network for which Microsoft is supporting.

Nor does Dole explicitly teach that the industrial automation program is to control a programmable logic controller (PLC). But this limitation has been addressed in claim 1.

As per claim 45, Dole discloses client transmitting to the server data relating to the markup language version of the automation computer program, wherein the server has access to the modified industrial automation computer program in response thereto, the modified industrial automation computer program is provided in the markup language version (e.g. Fig. 5-6; col. 15, line 58 to col. 16, line 4), and further comprising: transmitting the markup version modified industrial automation computer program to the client system address to be received by the client

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(Fig. 5; Fig. 10 – Note: Fig. 10, steps 1115, 1117 versions to select and posted to developers reads on modified industrial automation computer program or methodologies version transmitted in markup language).

As per claim 46, Dole discloses modeling to support a business application programming scheme using a modeling tool (re claim 44) but fails to disclose using electronic mail message for communications. Official notice is taken that in an enterprise wherein multiple users are connected via the enterprise network services such that network communication and data distribution help fulfill the enterprise business applications, the use electronic mail to communicate data or update information was a well-known concept at the time the invention was made. The providing of electronic mail to Dole's system so as to enable multiple developers to communicate with the common framework to retrieve markup-formatted control data would have been obvious in light of the benefits related to such type of communications as suggested by the well-known concept from above.

As per claims 47 and 48, see Dole (e.g. col. 16, line 21-67; Fig. 5, 13).

As per claim 49, this claim includes a variation of claim 44, such variation considered evident in that a client can be a first or a second client in Dole's HTML communication protocol and service rendered to requesting developers, and is rejected using the rationale set forth in claim 44 to address the transmitting of control data based on the network address of the first client system, because in view of the server/client paradigm (Dole: Fig. 3-5), the markup language version in received by a first client and possibly a second client.

As per claim 50, this claim includes the same limitation of claim 4 or 40; and is rejected with the rationale used in claim 4 or 40 in conjunction with the rejection as set forth in claim 49;

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because in a network where markup data is distributed, rendering such data back into internal representation by a first, a second or a third client would be the same.

10. Claims 9, 13, 27, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dole, USPN: 6,634,008, and APA, and further in view of Webb et al., 'Programming Logic Controllers' *Principles and Applications*, Prentice-Hall, 1995, chp. 3, pp. 41-54 (hereinafter Webb)

As per claim 9, Dole does not teach graphical programming language comprising a ladder logic, but as evidenced by APA in enabling graphically programming a control of PLC, programming and modeling functionality of a ladder logic would have been as known a concept to designing a PLC, and this is evidenced by Webb (chp. 3). Therefore it would have been obvious for one skill in the art to enable the PLC program developing and graphical modeling based on the programming capabilities by Dole and APA (as set forth in claim 1) such that it utilizes programming of a PLC via a ladder logic program as taught by Webb because a ladder logic diagram and set up based on such graphical programming enable to detect improper flaws at each of controlling steps of a PLC (see Webb: ch. 3-4, 3-5, 3-6), when the steps are programmed to test and develop the very functionality of the PLC as set forth by APA.

As per claim 13, this claim incorporates the rejection of claim 7; and would also include the rationale to the 'ladder logic' limitation obvious in view of the rejection of claim 9.

As per claims 27 and 31, these claims correspond to claims 9 and 13 respectively, hence are rejected using the same rationale as set forth therein, respectively.

Response to Arguments

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11. Applicant's arguments filed 5/23/07 have been fully considered but they are not persuasive. Following are the Examiner's observation in regard thereto.

(A) Applicant has submitted that (Appl. Rmrks pg. 15, bottom) if the prior art does not match the claims then no prima facie is presented, and presenting why no prima facie is satisfied as set forth in the Applicant's approach satisfies 37 CFR 1.111(b). The extent of fulfilling a proper rebut is summarized in CFR 1.111(b) and accordingly Applicant should comply in addressing the state of a rejection by pointing out how the cited portions of the Prior Art reference used to reject the claim fail to teach a specific language of the claim; and as explained in the previous Office Action, such action has been deemed not taken from the part of the Applicant. It is in the interest of the Applicant, that specific grounds of rejection including all cited references be identified and properly analyzed for the Examiner to construe where in these citations there is lack of teaching with respect to what has been interpreted from a recited limitation. And this specially prescribed analysis as well as a proper presentation thereof would be part of this CFR; and as it stands, the points made by the Examiner in the previous 'Response to Arguments' appear to have been slighted: the Applicant fails to point out where exactly **each** of the cited parts distinguish against a corresponding part of the claim as in a mapping scheme, i.e. one for one as opposed to subsuming all in one allegation; that is, difference for one limitation, then difference for another. As a result, the possible scenario from giving merits to the format with which Applicants effectuate a rebuttal against the Office Action as previously submitted will summarized as follows: Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. In regard to

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Applicant's statement (*) that no answer (from the Examiner) is provided to any questions (by Applicants) in the previous response demonstrates that the applied portions did not teach the claimed subject matter (Appl. Rmrks pg. 17, top). There is no single legal ground in concluding that the Office Action fails to teach the claimed matter just because the Examiner failed to answer to the 'where' questions, **particularly when** these 'where' questions amount to demanding (**rather than** pointing out) how the cited parts meet the claim, when in fact instead of asking, the Applicants **should have** complied to the CFR 1.111(b) and **identify how** these cited parts distinguish over the language of specific limitation. Pointing how the cited portions such as provided in details in the Office Action would not be same as asking 'where'; for a prima facie correctness is statutory based on explaining about the differences between the reference teaching and the claimed language; not on asking. It is deemed that when the Office Action maps each part of the claim with a cited parts, and that for each obviousness rationale, the rejection has created a proper construction. That is, creating a onset about missing elements, presenting the suggested teachings or the actual teaching found in another reference or known practices, a reason to combine based on level of skill in the art or implicit/explicit suggestion, a combination and a positive result from combining (the base reference – Dole - and the secondary teaching – APA or Dardinski) to meet the entire obvious limitation. For each of the obvious rejection, it is required that a proper rebut identify each of the parts being utilized from the references and explain how (in substantial details) as combined they would not fulfill the required subject matter of the claim. The Applicants appear to paste over the claim language and the cited portions, then contend with merely asking questions concerning a USC § 103, thus, based on the above assertion (see *), it is deemed that a prima facie case of rebut is largely deficient.

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(B) Applicant has submitted that there has been no admittance of prior art in the BACKGROUND (Appl. Rmrks, pg. 24, bottom). Not until it is explicitly explained in the BACKGROUND that any identified prior art (or APA) subject matter therein is also part of the inventor's patent-seeking work, subject matter in the BACKGROUND will not be given any merits in terms of patentability; because patent-seeking invention is based from past failures or a need expressed in the background arts or technological approaches, and should not include this background teaching unless (emphasis added) explicitly stated so; and even if it did, another form impropriety would have occurred.

USC § 103 Rejection:

(C) For claim 1, Applicant present the claim subject matter, paste the Office Action corresponding cited parts of Dole to match claim 1, and then contends with asking the 'where' questions. The Dole teachings show a process when methodology of a given industrial endeavor is captured and the term 'convert' is explicit in the cited parts leading to a XML file. In response to which, the Applicant, rather than explaining how Dole's conversion tool (in view of the secondary/external teaching) fails to teach each and every part of the claim, contends with asking 'where' this, 'where' that. It is the Applicant's own interest in fulfilling the requirement of the above CFR and failure to do so would not enable the Office to properly determine whether the Office Action would have been overcome or not; hence it is impossible to give the Applicant's response any merits in light of the Applicant's fashion to present a very unusual or non-conforming CFR 1.111 type of response, necessarily when the rationale of rejection is about combination of teaching, not full and/or explicit anticipation by one reference. The argument is not sufficient to overcome the 103 Rejection of claim 1.

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(D) As for claims 5, 17, Applicant's argument amounts to alleged statement that the Office Action fails to have prima facie case (Appl. Rmrks pg. 28-29) because in part the Office did not answer to the 'where' questions. It is by way of a proper compliancy or adherence to the CFR 1.111(b) that Applicant would find a way to legitimately persuade the Office to withdraw a rejection. Jumping to the allegation construed as from the above argument would not be remotely proper or effective in establishing how the current rejection could be overcome, and the above CFR is purposely designed to obviate leap to conclusion just as those provided for claim 5, and 17.

(E) As per claim 19 (Appl. Rmrks pg. 30-32), the pattern by which the Applicant addresses the rejection corresponding to this claim is same as for claim 1. Hence, the argument would have to be referred to sections A and C. As per claims 23 and 39 (Appl. Rmrks pg. 33-34), refer to section D, which addresses the impropriety in the 'where' questions not nearly perfecting the basic requirements of the CFR § 1.111.

(F) As per claims 41-42 (Appl. Rmrks pg. 35-39), the same patterns as identified in sections A and C continue; and in response to the alleged statements against a prima facie case of rejection, the rejection against the claims will not be overcome, notwithstanding the explanation in regard to an improper case of CFR 1.111 rebut. As for the support for the Email limitation, refer to the following references related to modeling and distribution of data: USPN: 6584507; USPN: 6675353; USPN: 6832120; 20040095237 (Note: these references are provided in the PTO-892 form, regarding to which a keyword search would suffice in finding 'mail message' or *email*)

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(G) As per claims 40-50, new added limitations and **new grounds of rejections necessitated by amendments**, hence any analysis thereof will be deferred until future response.

(H) As per claim 51 related argument, refer to all of the response above; and accordingly, the Applicant's statement (Appl. Rmrks pg. 41) that the Office Action applies inapposite standard in characterizing the Applicant's argument will be referred to section A, C, and D above, in which explanation about what constitutes a proper CFR 1.111b type of response should be is been provided with emphasis.

As a whole, the arguments fail to amount to a proper form of statutorily permitted arguments, and the claims will stand rejected as set forth in the Office Action.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (571) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan A Vu
Patent Examiner,
Art Unit 2193
August 9, 2007